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PTO/SB/21 (09-04)

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number

09/615,039

Filing Date

7/11/2000

First Named Inventor

Morin, Gregg B

Art Unit

1632

Examiner Name

~~Paul Thomas Dowell, Ph.D.~~ Marcia Nobl

Attorney Docket Number

019/251C

ENCLOSURES (Check all that apply)

Fee Transmittal Form



Fee Attached

Supplemental
Amendment/Reply

After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request

Supplemental
Information Disclosure Statement
(2 pages)Certified Copy of Priority
Document(s)Reply to Missing Parts/
Incomplete ApplicationReply to Missing Parts
under 37 CFR 1.52 or 1.53

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a
Provisional Application

Power of Attorney, Revocation



Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) _____

☐ Landscape Table on CD

After Allowance Communication to TC

Appeal Communication to Board
of Appeals and InterferencesAppeal Communication to TC
(Appeal Notice, Brief, Reply Brief)☐ Notice of Appeal
Proprietary Information

Status Letter

Other Enclosure(s) (please identify
below):**Remarks**

1. PTO-1449 (2 pages) with copies of 38 references
2. Return receipt postcard

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

Geron Corporation

Signature

Printed name

J. Michael Schiff

Date

Sept 21/06

Reg. No.

40,253

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

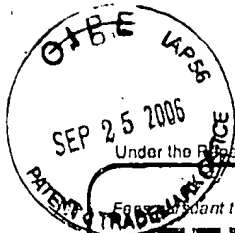
Signature

Typed or printed name

Date

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Fee Transmittal to the Consolidated Appropriations Act, 2005 (H.R. 4818).
FEE TRANSMITTAL
For FY 2006

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

Complete if Known

Application Number	09/615,039
Filing Date	7/11/2000
First Named Inventor	Gregg B Morin
Examiner Name	Paul Thomas Dowell, Ph.D. Marcia Nobl
Art Unit	1632
Attorney Docket No.	019/251C

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ Nonc ☐ Other (please identify): _____
☒ Deposit Account Deposit Account Number: 07-1139 Deposit Account Name: Geron Corporation
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)
☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
Total Claims		
- 20 or HP = _____ x _____ = _____		
HP = highest number of total claims paid for, if greater than 20.		
Indep. Claims		
- 3 or HP = _____ x _____ = _____		
HP = highest number of independent claims paid for, if greater than 3.		

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____				

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)	Fees Paid (\$)
Other (e.g., late filing surcharge): Information Disclosure Statement	180

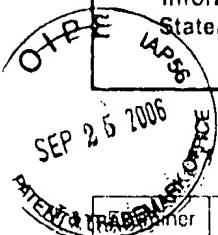
SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	Telephone 650 473 7715
Name (Print/Type)	SEP 21/06 MICHAEL SCHIFFE	Date	

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Form 1449 (modified)	Filing Date: 7/11/2000	U.S.S.N. 09/615,039
Information Disclosure Statement By Applicant	Inventors: Morin, Gregg B et al.	Docket: 019/251C
	Title: Oncolytic Virus that Replicates in Cells Expressing Telomerase Reverse Transcriptase	Group: 1632
		Examiner: Paul Thomas Dowell, Ph.D.



U.S. Patent Documents

Examiner Initial	Ref.	Document No.	Filing Date	Publication Date	Class/Subclass	Inventors	Title
MN	DA	6,638,762	Nov 19/97	2003-10-28	435/325;	Chang et al.	Tissue-vectors specific replication and gene expression
	DB	6,627,190	Sep 19/01	Sep 30/03	424/93.2	Wold WSM et al	Recombinant Adenovirus Vectors that are Replication-Competent in TERT-Expressing Cells
	DC	20030099616A1	Jul 25/02	5/29/2003	424/93.2	D Karpf et al. (Geron Corp.)	Dual Specificity Tumor Killing Vectors Driven by the Telomerase Promoter
MN	DD	20050214923A1	Mar 9/05	2005-09-29	435/235.1	Yu, DeChao; Li, Yuanhao	Pan cancer oncolytic vectors and methods of use thereof

Foreign Patent or Published Foreign Patent Application

Examiner Initial	Ref.	Document No.	Publication Date	Jurisdiction	Title	Translation
MN	DE	CA 2,362,367 B1	Aug 10/00	CA	Telomerase Reverse Transcriptase Transcriptional Regulatory Sequences	N/A
MN	DF	WO 01/23004	Apr 5/01	PCT	Replication Selective Adenoviruses for Use in Cancer Therapy	N/A
MN	DG	EP 1147181 B1	Dec 5/04	EP	Replicative Virus Driven by the Promoter for Telomerase Reverse Transcriptase for Use in Treating Cancer	N/A

Other Documents

Examiner Initial	Ref.	Author, Title, Source, Date
MN	DH	Chiu CP et al., Replicative senescence and cell immortality: the role of telomeres and telomerase, Proc Soc Exp Biol Med, 214(2):99 (1997)
	DI	Cooper MJ, Noninfectious gene transfer and expression systems for cancer gene therapy. Semin Oncol, 23(1):172 Review (1996)
	DJ	Dachs GU et al., Targeting gene therapy to cancer: a review, Oncol Res, 9(6-7):313 (1997)
	DK	Danet-Desnoyers GA et al., Telomerase vaccination has no detectable effect on SCID-repopulating and colony-forming activities in the bone marrow of cancer patients, Exp Hematol, 33(11):1275 (2005)
	DL	Durrant LG, Cancer vaccines, Anticancer Drugs, 8(8):727 (1997)
	DM	Harley CB et al., Telomeres and telomerase in aging and cancer, Curr Opin Genet Dev, 5(2):249 (1995)
MN	DN	Haung et al., Telomerase-dependant oncolytic adenovirus for cancer treatment, Gene Ther, 10(15):1241 (2003)

Examiner /Marcia Noble/	Date Considered 10/30/2006
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Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449 (modified)	Filing Date:	7/11/2000	U.S.S.N.	09/615,039
	Inventors:	Morin, Gregg B et al.	Docket:	019/251C
	Title:	Oncolytic Virus that Replicates in Cells Expressing Telomerase Reverse Transcriptase	Group:	1632
			Examiner:	Paul Thomas Dowell, Ph.D.
Information Disclosure Statement By Applicant				

Other Documents

Examiner Initial	Ref.	Author, Title, Source, Date
MN	DO	Huang Q et al., A novel conditionally replicative adenovirus vector targeting telomerase-positive tumor cells, Clin Cancer Res, 10(4):1439 (2004)
	DP	Holt SE, et al, Multiple pathways for the regulation of telomerase activity, Eur J Cancer, 33(5):761 (1997)
	DQ	Holt SE, et al., Lack of cycle regulation of telomerase activity in human cells, Proc Natl. Acad Sci USA, 94:10687 (1997)
	DR	Irving J, et al., Conditionally replicative adenovirus driven by the human telomerase promoter provides broad-spectrum antitumor activity without liver toxicity, Cancer Gene Ther, 11(3):174 (2004)
	DS	Ito H et al., Autophagic cell death of malignant glioma cells induced by a conditionally replicating adenovirus, J Natl Cancer Inst, 98(9):625 (2006)
	DT	Kawashima T et al., Telomerase-Specific Replication-Selective Virotherapy for Human Cancer, Clinical Cancer Res 10:285 (2004)
	DU	Kolquist KA, et al., Expression of TERT in early premalignant lesions and a subset of cells in normal tissues, Nat Gen, 19(2):182 (1998)
	DV	Kuppuswamy M et al., Oncolytic adenovirus that overproduces ADP and replicates selectively in tumors due to hTERT promoter-regulated E4 gene expression, Gene Ther, 12(22):1608 (2005)
	DW	Lanson NA Jr et al., Replication of an adenoviral vector controlled by the human telomerase reverse transcriptase promoter causes tumor-selective tumor lysis, Cancer Res, 63(22):7936 (2003)
	DX	Lee HW et al., Essential role of mouse telomerase in highly proliferative organs, Nature, 392(6676):569 (1998)
	DY	Li Y et al., Dual promoter-controlled oncolytic adenovirus CG5757 has strong tumor selectivity and significant antitumor efficacy in preclinical models, Clin Cancer Res, 11(24 Pt 1):8845 (2005)
	DZ	Morrison SJ, et al., Telomerase activity in hematopoietic cells is associated with self-renewal potential, Immunity, 5(3):207 (1996)
	EA	Norrbäck KF, et al., Telomerase and telomerase in normal and malignant haematopoietic cells, Eur J Cancer, 33(5):774 (1997)
	EB	Pan C, et al., Changes in telomerase activity and telomere length during human T lymphocyte senescence, Exp Cell Res, 231(2):346 (1997)
	EC	Patterson A, et al., Molecular chemotherapy for breast cancer, Drugs Aging, 14(2):75 (1999)
	ED	Prowse KR et al., Developmental and tissue-specific regulation of mouse telomerase and telomere length, Proc Natl Acad Sci U S A, 92(11):4818 (1995)
	EF	Reid TR et al., Effects of Onyx-015 among metastatic colorectal cancer patients that have failed prior treatment with 5-FU/leucovorin, Cancer Gene Ther, 12(8):673 (2005)
	EG	Ritz JM et al., A novel transgenic mouse model reveals humanlike regulation of an 8-kbp human TERT gene promoter fragment in normal and tumor tissues, Cancer Res, 65(4):1187 (2005)
MN	EH	Ryan PC et al., Antitumor efficacy and tumor-selective replication with a single intravenous injection of OAS403, an oncolytic adenovirus dependent on two prevalent alterations in human cancer, Cancer Gene Ther, 11(8):555 (2004)

Examiner	/Marcia Noble/	Date Considered	10/30/2006
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Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449 (modified) Information Disclosure Statement By Applicant	Filing Date:	7/11/2000	U.S.S.N.	09/615,039
	Inventors:	Morin, Gregg B et al.	Docket:	019/251C
	Title:	Oncolytic Virus that Replicates in Cells Expressing Telomerase Reverse Transcriptase	Group:	1632
			Examiner:	Paul Thomas Dowell, Ph.D.

Other Documents

Examiner Initial	Ref.	Author, Title, Source, Date
	EI	Ryan PC et al., Antitumor Efficacy and Tumor-Selective Replication with a Single Intravenous Injection of OAS403, an Oncolytic Adenovirus Dependent on Two Prevalent Alterations in Human Cancer, Cancer Gene Therapy pp1-15 (2004) duplicate of EH
MN	EJ	Sakabe H et al., Human cord blood-derived primitive progenitors are enriched in CD34+c-kit- cells: correlation between long-term culture- initiating cells and telomerase expression, Leukemia, 12(5):728 (1998)
	EK	Su et al., Potent antitumoral efficacy of a novel replicative adenovirus CNHK300 targeting telomerase-positive cancer cells, J Cancer Res Clin Oncol, 130(10):591 (2004)
	EL	Suresh MR, Classification of tumor markers, Anticancer Res, 16(4B):2273 (1996)
	EM	Tahara H., et al., Immuno- histochemical detection of human telomerase catalytic component, hTERT, in human colorectal tumor and non-tumor tissue sections, Oncogene, 18(8):1561 (1999)
	EN	Thomson JA, et al., Embryonic stem cell lines derived from human blastocysts, Science, 282(5391):1145 (1998)
	EO	Wirth T et al., A telomerase-dependent conditionally replicating adenovirus for selective treatment of cancer, Cancer Res, 63(12):3181, (2003)
	EP	Yui J, et al., Telomerase activity in candidate stem cells from fetal liver and adult bone marrow, Blood 9(9):3255 (1998)
MN	EQ	Zou W et al., A novel oncolytic adenovirus targeting to telomerase activity in tumor cells with potent, Oncogene, 23(2):457 (2004)

Examiner	Marcia S. Noble	Digitally signed by Marcia S. Noble DN: cn=Marcia S. Noble, o=US p=103743, ou=AU 1037, email=Marcia.Noble@uspto.gov Date: 2006.10.30 12:24:59 -0500	/Marcia Noble/	Date Considered	10/30/2006
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Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



IFCU

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: Gregg Morin et al.

Filing Date: July 11, 2000

Serial No: 09/615,039

Docket: 019/251c

Title: ONCOLYTIC VIRUS THAT REPLICATES
IN CELLS EXPRESSING TELOMERASE
REVERSE TRANSCRIPTASE

Art Unit: 1632

Examiner: ~~Paul Thomas Dowell, Ph.D.~~ Marcia Noble

INFORMATION DISCLOSURE STATEMENT

PURSUANT TO 37 CFR § 1.97(c)(2)

Commissioner for Patents
Alexandria VA 22313

Dear Sir,

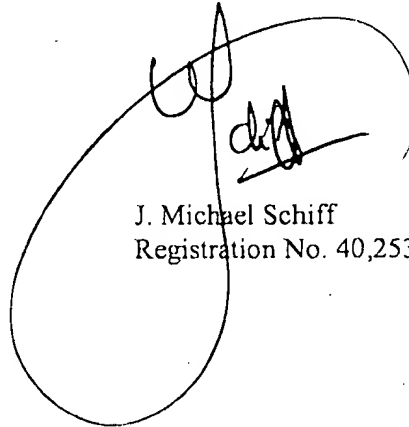
The information listed in the accompanying form PTO-1449 and provided herewith may be material to examination of this application and is submitted in compliance with the duty of disclosure under 37 CFR § 1.56. The Examiner is requested to make this information of record in the application.

This Information Disclosure Statement is not to be construed as a representation that a full search for relevant information has been made, that all relevant information has been found, or that the information provided with this Statement is considered to be material to patentability of the claimed invention as defined under 37 CFR § 1.56(b).

This Information Disclosure Statement is being filed after the first Office Action on the merits, but before issuance of a final Office Action or Notice of Allowance, pursuant to 37 CFR § 1.197(c)(2). Authorization to charge Deposit Account 07/1139 with the fee therefor under 37 CFR § 1.117(p) is provided in the accompanying fee calculation sheet.

Should any other fees be required for further consideration of the application and the enclosed information, the Commissioner is hereby authorized to charge such fees (or credit any overpayment) to the Deposit Account.

Respectfully submitted,

A large, loopy handwritten signature in black ink, likely belonging to J. Michael Schiff, is written over the signature block. The signature is stylized and extends across the block.

J. Michael Schiff
Registration No. 40,253

GERON CORPORATION
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September 21, 2006